

**Innovation for Our Energy Future**

# Job and Economic Development Impact (JEDI) Model: A User-Friendly Tool to Calculate Economic Impacts from Wind Projects

## Who Should Use JEDI?

JEDI should be used by anyone interested in identifying local economic impacts associated with constructing and operating wind power plants.

The model is designed in a user-friendly format that can be easily modified, accommodating varying levels of project-specific information and user skill. The tool is designed for those who have basic or detailed information about a wind project.

## How Does JEDI Work?

Utilizing economic multipliers, JEDI provides employment, income and output impacts for any size project. In its default form, state-specific analyses can be conducted. County or regional analyses will require revisions to the multipliers.

The user simply enters data specific to the wind project, including year of installation, size of the project, location, cost (\$/kW), and any other available site-specific information. When specific data are unavailable, the model uses default values.

When run, the model evaluates and sums the various impacts, including direct, indirect and induced effects. State-specific multipliers and personal expenditure patterns are used to derive the results.

[www.eere.energy.gov/windpoweringamerica/jedi.html](http://www.eere.energy.gov/windpoweringamerica/jedi.html)

## Sample screens

### Wind Plant - Project Data Summary

Year of Construction	2004
Project Location	Weld, CO
Project Size - Nameplate Capacity (MW)	40.0
Turbine Size (KW)	1500
Number of Turbines	27
Construction Cost (\$/KW)	\$1,000
Annual Direct O&M Cost (\$/KW)	\$12.50
Money Value (Dollar Year)	2004
Project Construction Cost	\$40,000,000
Local Spending	\$5,090,463
Total Annual Operational Expenses	\$7,024,000
Direct Operating and Maintenance Costs	\$500,000
Local Spending	\$312,649
Other Annual Costs	\$6,524,000
Local Spending	\$508,000
Debt and Equity Payments	\$0
Property Taxes	\$400,000
Land Lease	\$108,000

### Local Economic Impacts - Summary Results

	Jobs	Earnings	Output
During construction period			
Direct Impacts	42	\$1.37	\$5.09
Construction Sector Only	32	\$1.06	\$4.28
Indirect Impacts	27	\$0.86	\$3.54
Induced Impacts	34	\$0.89	\$3.19
Total Impacts (Direct, Indirect, Induced)	103	\$3.12	\$11.81
During operating years (annual)			
Direct Impacts	11	\$0.31	\$0.53
Plant Workers Only	8	\$0.25	\$0.25
Indirect Impacts	2	\$0.06	\$0.26
Induced Impacts	8	\$0.20	\$0.71
Total Impacts (Direct, Indirect, Induced)	20	\$0.57	\$1.51

Notes: Earnings and Output values are millions of dollars in year 2004 dollars. Jobs are full-time equivalent for one year. Plant workers include field technicians, administrators, and managers. Economic impacts "During operating years" represent impacts that occur each year plant is operating. Totals may not add up due to independent rounding.

## Features

- Designed for all levels of users, no experience with spreadsheets or background in economic modeling is required to use this tool.
- Online instructions on how to proceed with entering data for analysis are included.
- Detailed information is included to help users understand the type of data required for specific cells.
- Default data include state-specific multipliers.
- JEDI features flexible input options – users can enter as much or as little project-specific information as is available, including expenditures and local share of spending.
- The model provides detailed construction spending and annual O&M expenditures as well as the portion of local spending.
- The model identifies local spending on debt and equity payments, property taxes and land lease payments.
- JEDI analyzes local jobs, earnings and output (economic activity) – including one-time impacts from the construction phase and annual or ongoing impacts from operations.
- The user Add-In Location feature allows user to model county or regional impacts.
- The model includes economic data through 2000.